KRTG 8

Green light contrast scanner

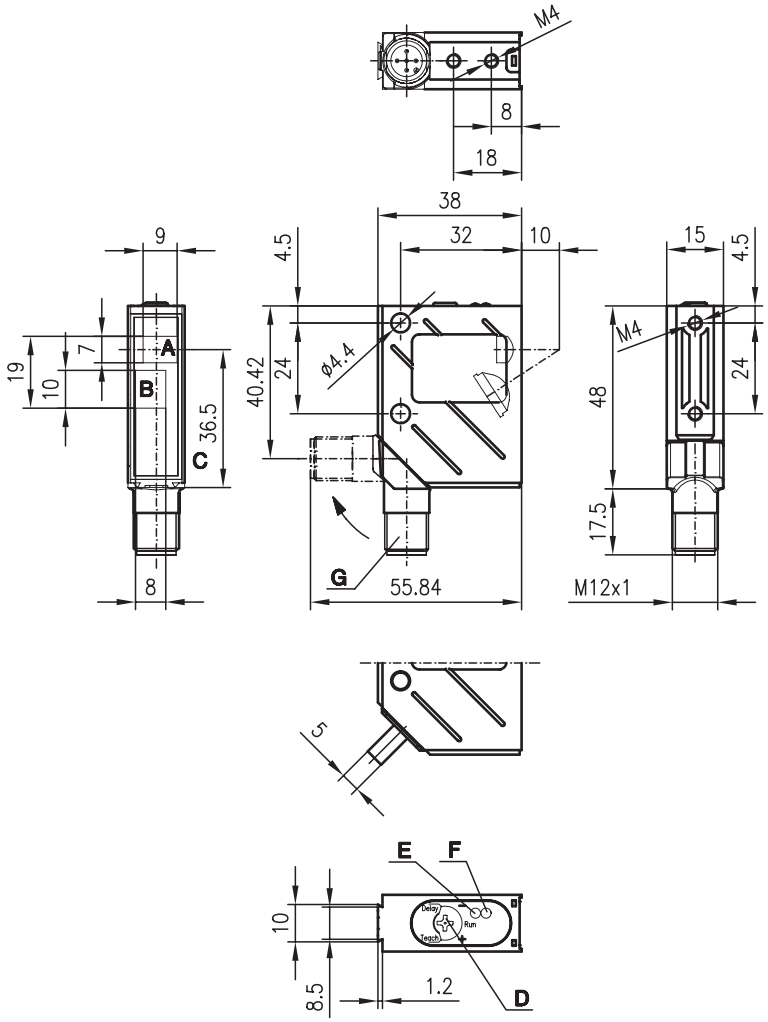
10 mm

10 - 30 V DC

8 kHz

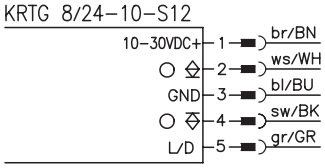
- Static teach-in procedure
- Green transmission LED
- M12 turning connector

Dimensioned drawing



A Transmitter
B Receiver
C Optical axis
D Operational control
E LED green
F LED yellow
G 90° turning connector

Electrical connection



Accessories:

(available separately)

- M12 connectors (KD …)
- Cable (KB …)
- Mounting systems
- Control guard

Specifications

Optical Data

Scanning range [1]	10mm ± 1mm
Light spot dimensions	2mmx2mm
Light source	LED green

Timing

Switching frequency	8kHz
Response time	62.5µs
Delay before start-up	≤ 650ms

Electrical data

Operating voltage U_B	10 … 30VDC
Residual ripple	≤ 15% of U_B
Bias current	≤ 35mA
Switching output	1 PNP and 1 NPN switching output
Function	light/dark reversible
Signal voltage high/low	≥ (U_B-2V)/≤ 2V
Output current	max. 100mA

Indicators

LED green	ready
LED green flashing	teaching in progress
LED yellow	object detected
LED yellow flashing	device or teach error

Mechanical data

Housing	metal
Optics cover	glass
Weight	70g
Connection type	M12 connector, 5-pin

Environmental data

Ambient temp. (operation/storage)	-40°C … +60°C/-40°C … +70°C
Protective circuit [2]	2, 3
VDE safety class [3]	II, all-insulated
Protection class [4]	IP 67
LED class	1 (acc. to EN 60825-1:1994 +A1:2002 +A2:2001)
Electromagnetic compatibility	IEC 60947-5-2

Options

L/D input [5]	
Dark switching/light switching	U_B/0V or not connected
L/D delay	< 0,5ms
Pulse delay [6]	10ms, can be activated via step switch

1) Scanning range: recommended range with performance reserve
2) 2=polarity reversal protection, 3=short-circuit protection for all outputs
3) Rating voltage 250VAC
4) In stop position of the turning connector (turning connector locked)
5) L/D switching is activated after "teach-in" or "power on"
6) Relative to object

Order guide

Designation	Part No.
KRTG 8/24-10-S12	500 36376

Tables

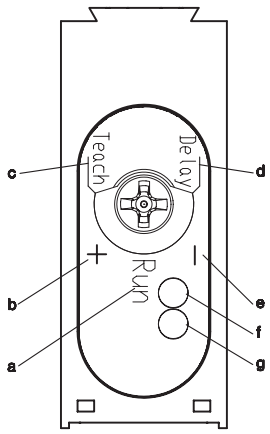
Diagrams

Remarks

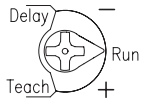
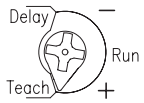
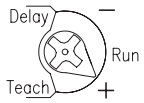
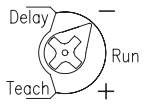
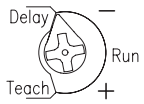
- With shiny objects, the sensor is to be mounted perpendicular to the object surface.

KRTG 8

Controls and indicators

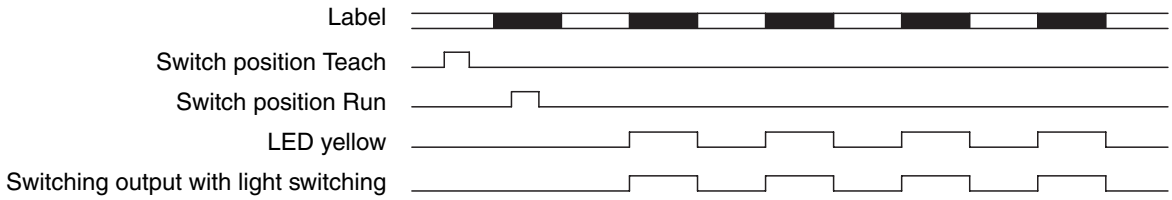


a Switch position **Run**
b Switch position **+**
c Switch position **Teach**
d Switch position **Delay**
e Switch position **-**
f Operation and teach indicator (LED green)
g Object/light path (LED yellow)

Step switch		Function
	**Run**	Teach and Run position for marker contrast
	**Teach**	Teach position for background contrast
	**+**	Switching threshold is increased by +5%
	**-**	Switching threshold is reduced by -5%
	**Delay**	Activation/deactivation of 10ms pulse stretching

The step switch must be set to > 1s to allow the individual functions to be activated.

Signal propagation



Teach procedure for statical teach-in

	Operation	Transmitter	LED green	LED yellow
1	Position the light spot on the background	Green light spot visible	ON	ON/OFF
2	Set step switch from Run -> Teach	Green light spot visible	3Hz	OFF
3	Position the light spot on the marker	Green light spot visible	3Hz	OFF
4	Set step switch from Teach -> Run	Green light spot visible	3Hz	OFF
	Teach-in successful	Green light spot visible	ON	ON
	Teach-in error	Green light spot flashes with 3Hz	OFF	3Hz

The step switch must be set to > 1s to allow the individual functions to be activated.

Changing the switching threshold

	Operation	Transmitter	LED green	LED yellow
1	Step switch is in Run position	Green light spot visible	ON	ON/OFF
2	Set the step switch from Run -> (+/-)	Green light spot visible	OFF	OFF
3	Sensitivity is changed in steps of 5% each	Green light spot visible	1Hz	OFF
4	Set the step switch from (+/-) -> Run	Green light spot visible	ON	ON/OFF

In switch position (+), the switching threshold is increased by 5% every second.

In switch position (-), the switching threshold is increased by 5% every second.

Modification of switching threshold activated:LED green = 1Hz

Maximum value switching threshold reached:LED green = ON

Minimum switching threshold reached: LED green = OFF

Pulse stretching on/off

	Operation	Transmitter	LED green	LED yellow
1	Step switch is in Run position	Green light spot visible	ON	ON/OFF
2	Set step switch from Run -> Delay	Green light spot visible	OFF	ON/OFF
3	Status display of the pulse stretching	Green light spot OFF	6Hz	Status display: ON=Delay active OFF=Delay not active
4	Delay before switching: 10s After 10s, the delay is changed	Green light spot OFF	6Hz	Status display: ON=Delay active OFF=Delay not active
5	Set step switch from Delay -> Run	Green light spot visible	ON	ON/OFF